



Michael D. Coats
Vice President, Chevron Mining Inc.

October 8, 2018

Via E-mail/USPS Certified Mail

Ms. Sarah Holcomb, Program Manager
Point Source Regulation Section
Surface Water Quality Bureau
Resource Protection Division
New Mexico Environment Department
P.O. Box 5469
Santa Fe, NM 87502-5469

**Re: Chevron Mining Inc. – Questa Mine – NPDES NM0022306
Response to Compliance Evaluation Inspection Report
Dated September 6, 2018**

Dear Ms. Holcomb:

This letter is to confirm Chevron Mining Inc. (CMI) received an electronic copy of the September 6, 2018, the Compliance Evaluation Inspection Report and includes CMI's response to the items noted, including where appropriate, compliance schedules for CMI's actions to address those items. The structure of this submittal is to respond to the "Further Explanations" section of the inspection and supply additional information, and hereby provides responses to the items identified in the report. As we have discussed with New Mexico Environment Department (NMED) on several occasions, CMI is interested in maintaining an open, transparent and collaborative relationship with NMED, U.S. Environmental Protection Agency (USEPA) and other state agencies such as New Mexico Mining and Minerals Division (MMD) and Office of State Engineer (OSE). As was observed and discussed during the inspection, the Questa Mine Site (Site) is undergoing numerous changes as the result of state led closure activities and remediation activities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) under the oversight of USEPA Region 6. In an effort to maintain an open relationship CMI has met with various agencies frequently to provide updates on the changes that have occurred at the site.

Section A - Permit Verification (See Section C O&M for BMPs and Section E Flow Measurement for Outfalls 004 and 005) – All Marginal

Duty of Reapply Permit Requirements and Findings

Part III.A.4 (General Conditions, Duty to Reapply) of the 2013 NPDES Permit states "If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit."

Permittee submitted renewal application to USEPA Region 6 2013 Permit Writer dated April 30, 2018 (six months, but greater than 180 days before the permit expires on October 31, 2018). USEPA issued an administratively complete letter dated May 25, 2018.

Questa Mine
P.O. Box 469, Questa, NM 87556
Tel 575 586 7507
michaelcoats@chevron.com

Response:

The permit application was submitted within the appropriate timeframe and as mentioned in the comment was deemed administratively complete on May 25, 2018. On September 18, 2018 a phone call was held between EPA, NMED and CMI to discuss any clarifications or requests for additional information related to the permit. Based on the discussion EPA will issue a formal request for additional information to support the permit application. However, from the discussion there is minimal additional information required and some items are reports previously submitted under CERCLA.

Spring 13 and Spring 39 Interception System and Ground Water Well System Permit Requirements and Repeat/Continued Findings

NMED Comment - Continued or Repeat Findings

Updates, specification and/or clarification of requirements for the BMP conditions appear needed in the NPDES Permit.

Permit Requirements: Part II.D. Best Management Practices of the 2013 NPDES Permit for the spring interception systems and groundwater wells states *"This permit prohibits the discharge to the Red River of pollutants traceable to point source mine operations except in trace amounts" and "[i]mplementation of these Best Management Practices...is considered compliance with this prohibition."* Part II.D of the NPDES Permit states *"The permittee shall also properly operate the ground water withdrawal well below the toe of the Sugar Shack South deposit at a location approximately 100 yards southwest of the old mill site."* Part III.B.3.a (Standard Conditions, Proper Operation and Maintenance) of the 2013 NPDES Permit states *"The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit...This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit."*

Non-compliance report and recordkeeping requirements in the 2013 NPDES Permit include Part III.D.11 (signatory requirements), Part III.D.7.b and c (steps and waiving each written report), and Part III.B.4 (specific conditions and allowances).

Findings/Additional Information: Permit Verification, Reports & Record Keeping and Operations & Maintenance findings for the decreased pumping rates of the interception systems and visible white aluminum hydroxide precipitates at Spring 13 and Spring 39 were discussed in the 2015 NPDES CEI and 2016 NPDES RI reports. Not all current or planned groundwater wells are described in the 2013 NPDES Permit. Related to effectiveness, CMI's 2018 NPDES Renewal Application April 30, 2018, GEI, Technical Memorandum, Supplemental Information, Section 3.1 Mine Site states *"The Spring 13 and Spring 39 systems were found to remove little mass of constituents and have had a near negligible impact on the river water quality due to reduced concentrations at the Spring 39 system and low collection rates from iron precipitate fouling at the Spring 13 system."* Temporary shut downs or outages of all or portions of the seepage interception and groundwater withdrawal well systems continue due to maintenance, construction, and electrical problems. A summary of reported planned and unplanned outages submitted by Permittee Representatives by e-mail since the 2016 NPDES RI report is attached.

Reviewed e-mail notifications for outages / possible non-compliance did not include steps being taken to reduce, eliminate, and prevent recurrence (see Part III.D.7.b of the 2013 NPDES Permit).

Response:

As previously stated in the 2015 CEI compliance response letter, and as documented in the USEPA's 2010 Record of Decision (ROD) for the Questa Mine Site and other evaluations (USFS, USGS study from 2010), the exact source for the Al, Fe and other metals observed in this area is undefined and have been linked to several potential sources, such as natural mineralization and historic fill material. To assist in managing potential impacts resulting from Spring 13 and 39, seepage interception systems were installed in 2002 and upgraded in 2005 as a best management practice in accordance with Section D of the permit. CMI continues to operate the Spring 13 and 39 water collection systems and as noted in the comment and documented in the ROD, the systems have reduced loading to the river from these potential sources.

Little mass is removed from the Spring 39 system because alluvial groundwater, the source of the water at Spring 39, has low constituent concentrations due to pumping of the BMP Groundwater Withdrawal Wells (GWW-1, -2, -3) along the roadside rock piles. The Spring 13 system removes little mass due to low collection rates and iron-fouling of the drain line. Concentrations at the Spring 13 system have not improved since it was installed in 2002; however, the upgradient alluvial groundwater has improved. This suggests that the source of the elevated concentrations is proximal to Spring 13 and likely the natural mineralization from the hydrothermal scar that is immediately north of Spring 13.

Regarding the "planned and unplanned outages" from January 1, 2016 through June 12, 2018. The notices for outages have been diligently submitted to USEPA and NMED via email and fall under the following categories with the respective total hours:

Outage	Total Hours
• System Maintenance	900.5
• Water Treatment Plant (WTP) Construction	650
• Pump Failure	326
• Kit Carson Electrical Services power interruption	40.5
• Electrical power interruption	24
• Mine Site Facilities Demolition	23
• Weather	22

Based upon CMI records, during this operation period, the BMPs operated 89% of the time, with only 11% downtime, which were related to the above-mentioned causes.

The longest outage was 724 hours (8/21/17 to 9/20/17) and was related to maintenance and making major improvements to Spring 13 WCS to prevent the reoccurrence of the problem. Specifically, the line feed pump was removed, and a new pump was installed; a feedline obstruction removed; a new line inlet configuration was installed; collection and feed lines were flushed, consistent with the maintenance SOP for this engineering control. In addition, before this work could commence CMI sought approval from the United States Forest Service (USFS) under a Special Use Permit.

The NMED CEI report stated “*possible non-compliance did not include steps being taken to reduce, eliminate, and prevent recurrence*”.

Notices that are sent to USEPA and NMED typically reference the use of isolation valves for both Spring 13 and 39 WCS. These valves prevent backflow and subsequent discharge from the WCS collected waters.

Additionally, should the outage last longer than expected both agencies have been provided with updates as well as documenting the improvements made

to the systems. An example of those updates can be found in Attachment 1, which were related to the August 2017 Annual Maintenance and Spring 13 WCS improvements outage. During that time the following correspondences were sent to USEPA and NMED:

Date:	Author:	Notice Type:
8/17/18	Armando Martinez	Initial notice.
8/23/18	Jeff Schoenbacher	Update on maintenance.
9/5/17	Jeff Schoenbacher	Update on maintenance/USFS permit.
9/18/17	Jeff Schoenbacher	Update found blockage, Spring 13 online.
9/20/17	Jeff Schoenbacher	Update both Spring 13 and 39 operating.

Outfall 004 and Outfall 005 Location and Flow Measurement Accuracy

NMED Comment:

Additional clarification or information (e.g., discharge tables or model calculations) may be needed to confirm that the flow measurements for Outfall 004 and Outfall 005 meet accuracy requirements of the NPDES Permit. Additional clarification appears needed to describe discharge locations in the NPDES Permit.

Permit Requirements: Location of the measurement locations for Outfall 004 and Outfall 005 is provided in the 2013 NPDES Permit. Flow Type in Part I.A for Outfalls 004 and 005 states “Measure by Weir.” Part III.D.6 (flow measurements) of the 2013 NPDES Permit states:

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

Findings/Additional Information: CMI’s 2018 NPDES Renewal Application Form 2C does not provide estimate average flow for Outfall 004 or Outfall 005. Outfall 004 has a weir installed in a shallow channel (2014 NPDES CEI report). The 2018 NPDES Renewal Application describes changes to the Outfall 005 catchment basin and flow measurement which are under construction. The Enhanced Outfall 005 Catchment is a concrete-lined stormwater storage facility that also has a connection by a spillway to the WTP upset cell. Collected water that exceeds the storage capacity of the catchment (100-year 24- hour event) water would discharge

over the spillway to Outfall 005. The application describes that the spillway is 400 ft long, protected with D50 riprap, three (3) feet below the catchment crest. The spillway was designed to function as a broad-crested weir. There is no channel described for the weir. The renewal application states that "A staff gage will be installed as part of the Enhanced 005 Catchment that can be used to measure the depth of water flowing over the spillway and thereby estimate the discharge from the spillway." The 2018 Renewal Application describes that the discharge from the spillway would enter the Red River at the previous Outfall 005 location. Figure 1 of the 2018 NPDES Renewal Application does not show where a 400-foot wide discharge would cross under highway NM 38 and enter Red River.

Response:

No discharges have occurred through Outfall 004 and 005, consequently, CMI's 2018 renewal application form 2C does not have average flow measurements and storm flows are impossible to accurately estimate.

Outfall 004 is equipped with a Parshall flume a few feet upstream of the weir. The flume has a 12-inch wide throat and is capable of flow measurements up to 16 cubic feet per second. The flume is equipped with a stilling well and pressure transducer. The pressure transducer records the depth of water flowing through the flume, which is then used with the depth-flow rating specifications of the flume to calculate the flow. To date, no flow has occurred at Outfall 004.

As stated in the comment, the renewal application describes changes to the Outfall 005 catchment basin and flow measurement which are under construction. During a telephone call with USEPA (Brent Larsen and Laura Stankosky) on March 26, 2018 CMI discussed the upgrades to the 005 catchment and subsequent changes to the 005 weir and stormwater flume under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Prior to the call CMI provided drawings and options for measuring flow from the catchment. The outcome of the discussion was that the spillway on the new Enhanced 005 Catchment was a "broad crested weir" and the use of the staff gauge with the spillway rating table allowed for accurate measurements of any discharge over the weir. EPA stated the alternate design that was discussed which included the use of a standpipe and smaller weir similar to what is in use now would not provide an accurate measurement of flow since only a small volume of discharge would be routed through the standpipe and weir. Per the permit, the full discharge must be reported on a daily basis. The use of the broad crested weir and staff gauge allowed for safe and accurate estimate of flow. A sample location was also agreed to during the call. It was determined that the Enhanced 005 catchment would not trigger an amendment to the 2013 permit if the catchment became operational prior to the new NPDES permit being issued. The design and agreed method for measuring flow and collecting samples was again presented to EPA during an April 4, 2018 meeting to review key components of the permit application. As is stated in the comments, the Enhanced 005 catchment is designed to hold stormwater from the surrounding watershed for a 100-yr, 24-hr event. Excess water that exceeds the storage capacity of the catchment would discharge over the 400-foot long spillway as a sheet flow over the spillway. Should this occur the existing ditch and culvert under the highway would likely become inundated and water would flow over the highway and blend with Red River water that would also likely be out of bank given the assumed 100-yr, 24-hr event storm condition.

Outfall 002/003 Seepage Interception System Upgrade

Part I of the 2013 NPDES Permit includes both loading and concentration effluent limitations and monitoring. Part III.D.I.a (Reporting Requirements, Planned Changes, Industrial Permits) of the 2013 NPDES Permit states "The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility...."

Loading information is discussed for the upgrades to the Outfall 002/003 seepage interception system in the 2018 Renewal Application (Appendix D, Water Management Update and Evaluation of Best Management Practices, Arcadis U.S., Inc., April 20, 2018). However, more information on the specific quantities and concentrations (nature or quantity of pollutants), which were used to estimate loading may be needed for Outfall 002.

Response:

Section 3.4 of Appendix D of the renewal application discusses planned upgrades to the existing seepage interception system at the tailing facility, which are being performed as CERCLA Remedial Actions, as required by the Partial Consent Decree. The upgrades include additional extraction wells, refurbishment of a seepage barrier, termination of the pumpback system, and construction of a new extraction well system at the southwest portion of the tailing facility. A Design Report for the upgrades was prepared that contains a loading analysis to estimate the effect these new upgrades will have on concentrations and loading at Outfall 002 (Arcadis 2017). The analysis estimated collection/pumping rates for the new upgrades and concentrations based on results of pre-design investigations, and values used in the loading analysis are contained in Table 2 of the Design Report. It should be noted that the table is based on concentrations and flow rates from a pre-design investigation that was conducted prior to the design work. While these measured flows and concentrations formed the basis for the loading analysis, actual concentrations may be higher or lower than predicted and will not be known until after the upgrades to the Seepage Intercept System have been completed and the System is in operation. Construction of the upgrades is scheduled to begin in fall 2018, and as upgrades become operational, pumping and water quality data will be collected to update the loading analysis. A copy of the design report is available upon request.

Arcadis. 2017. Tailing Facility Seepage Barrier Upgrade Pre-Final Design Report, Early Design Actions, Chevron Mining Inc., Questa Mine Superfund Site, Questa, New Mexico, Prepared for Chevron, Environmental Management Company, Revision 0, January 16.

Section B – Record Keeping and Reporting – Marginal

Permit Requirements

Part III.C.4 (Monitoring and Records, Record Contents) of the 2013 NPDES Permit states

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;*
- b. The individual(s) who performed the sampling or measurements;*
- c. The date(s) and time(s) analyses were performed;*
- d. The individual(s) who performed the analyses;*
- e. The analytical techniques or methods used; and*
- f. The results of such analyses.*

Findings

Reviewed contract laboratory analysis reports did not record the time of analyses or the name of the person(s) performing analyses.

Reviewed analytical results were not consistent with data reported on Discharge Monitoring Results (DMRs).

Part I.A (Effluent Limitations and Monitoring Requirements, Outfall 002) in the 2013 NPDES Permit include a TSS Daily Max concentration of 30 mg/L. For monitoring results on the June 2016 DMR, the TSS Daily Max was reported as less than (<), but the result was described as a detected concentration (63 mg/L) in non-compliance reporting. No averaging or calculations are used when reporting valid daily max concentrations.

Part I.A and Part II in the 2013 NPDES Permit require monitoring and reporting of whole effluent toxicity (WET) testing. Conditional retests were not accurately reported on DMRs for Outfall 001 and Outfall 002 based on information from the Permittee Representatives. All conditional retest reporting (#1, #2 and #3) for monitoring location TX1Q and TX2Q should be reviewed and corrected, as needed.

Additional Information: For WET testing retests, a "1" is entered if the No Observed Effects Concentration (NOEC) for survival and/or sub-lethal effects is less than the critical dilution; otherwise "0" is entered on the DMR. Reporting "1" or "0" indicates a retest was conducted. After discharges started in July 2017 thru June 2018, monthly Outfall 001 WET quarterly retests were reported as "0" indicating that a WET retest was conducted. Permittee Representatives described that no retests were required or conducted thru June 2018. Outfall 002 WET quarterly retests (TX2Q) were shown as "Not Received" on USEPA's summary reports. Permittee representatives may contact USEPA NetDMR contacts if there are questions on "no discharge" or in this case no data reporting or receipt of DMRs submitted electronically. A list of No Discharge/No Data (NODI) codes obtained August 2018 from USEPA R6 NetDMR contacts is attached. For example, NODI Code 9 indicates Conditional Monitoring-Not required this period.

Response:

ALS Environmental Laboratory analysis reports record the date of the analyses and name of the person performing analyses, see below, and the actual time the analyses were performed can be provided upon request. Going forward, the raw data sheets will be included in the ALS reports that document the actual time that the analyses is performed on the sample. The ALS Chain of Custody forms requesting the raw data have been revised and updated accordingly.

Field ID: Outfall-002-TO1N	Sample Matrix: WATER	Prep Batch: FL180823-1	Analyst: Andrew E. Jones
Lab ID: 1808226-1	% Moisture: N/A	QC Batch ID: FL180823-1-1	Sample Allquot: 20 ML
	Date Collected: 09-Aug-18	Run ID: FL180823-1A1	Final Volume: 20 ML
	Date Extracted: 23-Aug-18	Cleanup: NONE	Result Units: MG/L
	Date Analyzed: 23-Aug-18	Basis: As Received	Clean DF: 1
	Prep Method: NONE	File Name: Manual Entry	

The monitoring result on the June 2016 DMR for TSS Daily Max was originally reported to Ms. Gladys Good Jackson (USEPA) and Ms. Barbara Cooney (NMED) on July 5, 2016 (Attachment 2), informing both agencies of the 63 mg/L result.

Recognizing that TSS was historically non-detectable for Outfall 002, ALS Environmental Laboratory was directed to re-run the sample for TSS. In addition, another sample was taken from the June 8, 2016 sample matrix that was refrigerated and maintained by the sampling technicians. For further confirmation, Outfall 002 was also resampled for this parameter and sent to ALS Environmental Laboratory on July 5, 2016. The results for the TSS resampling were received 7/15/16 and the DMR was resubmitted factoring in the two non-detects (< 4 mg/L). The DMR in question was revised and resubmitted on July 18, 2016 after consulting with Ms. Jackson and the comment section of the DMR explains the TSS result and the resampling for this parameter. The revised DMR that was resubmitted on July 18, 2016 reflects the 63 mg/L maximum result (attributed to laboratory error) and does not reflect an average for the three samples. In addition, per Ms. Jackson this was the guidance received for reporting this result and the laboratory result and email correspondence were attached to the DMR and a "passed" receipt was received.

The CDX DMR module does not allow null values for the conditional retest fields. As a result, "0" was entered in these fields to submit the DMR and was intended to reflect no retests were conducted. In the future, NODI #9 "Conditional Monitoring – Not Required" will be used for Codes 22415, 22416, 51443. Additionally, the TX1 and TX2 DMRs have been revised and will be resubmitted in October of this year.

Additional Comments

Comments added to the June 2018 WET testing DMR provide additional information on the effect threshold concentration (IC₂₅) of 68% effluent. IC₂₅ value is a statistical calculation of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms. IC₂₅ results are not required to be reported by USEPA Region 6 in the State of New Mexico. Comments added to the Outfall 001 June 2018 WET testing DMR also include questions requesting clarifications on permit language for

Toxic Reduction Evaluations (TREs). The Permittee would need to submit a written request or contact the USEPA Permit Writer directly to receive clarification and confirmation on percent effluent requirements for sub-lethal TRE.

Response:

Whole effluent toxicity (WET) testing is not as straightforward as other basic chemical analyses due to the inherent variability from conducting tests with living organisms. Compliance in EPA Region 6 is based on one of the two statistical measures available for data interpretation in the chronic EPA methods (EPA 2002), the lowest-, and no-observed-effects concentrations (LOEC and NOEC). However, the IC₂₅ is also available for data interpretation. In fact, this is the preferred method for data interpretation in the Toxicity Identification Evaluation manual (EPA 1992).

While it is correct that IC₂₅ data are not required to be reported on the DMR, CMI would like to ensure the additional data are recorded and believe they should be considered when evaluating compliance for all tests, including the WET monthly retests due to the implications of potential monthly retest failure.

The permit is unclear whether a sublethal TRE is required after two or three monthly retest failures in addition to the trigger for a sublethal TRE. A written request for clarification of TRE has been made to the permit writer. This issue was discussed during the September 18, 2018 conference call between EPA, NMED and CMI. EPA agreed the permit is unclear. Based on current guidance, failure of two out of three retests would trigger a TRE, but EPA is going to confirm for CMI whether that is accurate.

Section D – Self Monitoring and Section F Laboratory – Both Unsatisfactory

Permit Requirements:

Part I.A (Monitoring Requirements, Outfall 002) in the 2013 NPDES Permit require annual 24-hour composite monitoring and reporting for dissolved uranium and quarterly 24-hour composite monitoring and reporting for total cyanide.

Part I.D (Effluent Characteristic Analysis for New Discharges, Outfall 001) of the 2013 NPDES Permit states “beginning the start-up of the new water treatment and lasting through the expiration date of the permit, the permittee shall collect samples at Outfall 001 once per calendar year, during the period of mill operations, for analysis of effluent characteristics as listed below. Samples shall be taken at least six months apart or longer. The first sample shall be taken within the 30 days of first commencing discharge after the final compliance schedule.” Parameter categories include Radioactivity, Nutrients, and Chlorine; Volatile Compounds; Acid Compounds; Base/Neutral Compounds; and Pesticides and PCBs. Part I.D of the 2013 NPDES Permit also states “In addition to annual effluent characteristics samples as addressed above, the permittee must also take samples once per calendar quarter for...METALS AND CYANIDE Antimony (D); Arsenic (D); Beryllium (D); Cadmium (D); Chromium-III (D); Chromium-VI (D); Chromium (D); Copper (D); Lead (D); Manganese (D); Mercury (T & D); Molybdenum (T & D); Nickel (D); Selenium (T); Silver (D); Thallium (D); Zinc (D); and Cyanide (T). [Note: T means total recoverable or total and D means dissolved.]”

Part III.C.5.a (Monitoring and Records, Monitoring Procedures) of the 2013 NPDES Permit states “[m]onitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.”

Findings

Annual dissolved uranium samples were not filtered within 15 minutes of collection of the last 24-hour composite grab sample based on discussions with the Permittee Representatives. USEPA DMR NODI Code H indicates an “Invalid Test.”

Additional Notes: 40 CFR 136.3 Table II Footnote 7 states “For dissolved metals, filter grab samples within 15 minutes of collection and before adding preservatives. For a composite sample...filter the sample within 15 minutes after completion of collection and before adding preservatives. If it is known or suspected that dissolved sample integrity will be compromised during collection of a composite sample...over time (e.g., by interchange of a metal between dissolved and suspended forms), collect and filter grab samples to be composited....”

Chevron Mining-Questa Mine Standard Operating Procedures (SOP), January 5, 2016, Section 10.0, Page 14 lists “No Preservation” for radiological parameters (e.g., Alpha) and dissolved

chromium VI that are not consistent with Table II (Required Containers, Preservation Techniques, and Holding Times) in 40 CFR 136.3. Required acid preservation was not documented.

Additional Notes:

40 CFR 136.3 Table II for Radiological Tests indicate that alpha, beta and radium are preserved with nitric acid (HNO₃) to pH <2. The analytical laboratory Condition of Sample Upon Receipt Form dated August 15, 2017 indicates that "all aqueous samples requiring preservation preserved correctly" as "YES." However, pH was neither recorded on the provided chain of custody for samples collected on the August 14, 2017 nor recorded on the provided analytical laboratory receipt form dated August 15, 2017.

40 CFR Table II Metals, chromium (Cr) VI preservation is listed as pH = 9.3 to 9.7 and the related Footnote 20 Cr-VI states "To achieve the 28-day holding time, use the ammonium sulfate buffer solution specified in EPA

Method 218.6. The allowance in this footnote supersedes preservation and holding time requirements in the approved hexavalent chromium methods, unless this supersession would compromise the measurement in which case requirements in the method must be followed." USEPA provides additional guidance for 40 CFR 136.3 Table II preservation requirements for NPDES approved methods in <https://www.epa.gov/cwa-methods/hexavalent-chromium-questions-and-answers#hierarchy>.

Reviewed contract laboratory analytical report dated April 26, 2016 for Outfall 002 total cyanide monitoring and September 13, 2017 for the results of annual August 2017 effluent characteristic monitoring lists methods which are not listed as approved in 40 CFR 136.3. Cyanide monitoring and effluent characteristic testing monitoring should be reviewed for compliance with 40 CFR 136.3.

Additional Notes: Examples of analytical methods not listed as approved in 40 CFR 136.3 include the following on the reviewed contract laboratory analytical reports: PAI 724 Rev 12 by GFPC (Radiological Test); and Hazardous Waste Test Methods / Solid Waste SW-846 procedures SW8270D by GC/MS (semi-volatiles), SW8260 (volatiles), and 7196A (chromium, hexavalent). Also, NPDES approved methods for total cyanide include EPA 335.4, Rev. 1.0 (1993), not EPA 335.2 cited in the April 26, 2016 and September 13, 2017 contract laboratory analytical report.

Response:

Outfall 001 annual characterization conducted in accordance with D. Effluent Characteristic Analysis for New Discharges (Outfall 001) is a discrete sample. Since the inception of sampling for this outfall the dissolved uranium, as well as other parameters requiring filtration, were filtered within 15 minutes. The filtration is conducted at the time of the sampling event at Outfall 001.

Regarding Outfall 002, the annual dissolved uranium sample is taken at the same time as the monthly 24-hour compliance sample. This requires three separate cuts, which is then combined and represents the composite sample for that month. The dissolved uranium was filtered and drawn off the refrigerated composite sample, thereby exceeding the 15-minute filtration limit. In

the future, sampling staff will filter from the three separate cuts, for the dissolved uranium sample, which is a "Report" requirement for the permit.

Chevron Mining-Questa Mine Standard Operating Procedures (SOP), January 5, 2016, Section 10.0, Page 14 listed "No Preservation" when the bottle inventory was being compiled for the annual characterization sample. The entry was a typo and has since been revised in the NPDES SOP that was updated September 24, 2018.

Attachment 3 represents the ALS "Sample Condition Form (Liquid)" for CMI Work Order 1708266, documenting the sample condition as being received with a pH <2 for the radionuclides. The sample condition form that records the pH is completed for every batch of samples received by ALS Environmental Laboratory. In the event this information is required it is available upon request.

The discrete grab pH sample for Outfall 001 annual characterization sample was also recorded on the provided chain of custody, which was part of the ALS report provided to NMED for the samples collected on August 14, 2017.

Project Name/No.		Outfall-001 Startup monitoring of NPDES				
REPORT TO:		Jeff Schoenbacher				
PHONE:		575-586-7537				
FAX:						
E-MAIL:		jschoenbacher@chevron.com				
COMPANY:		Chevron Mining Inc.				
ADDRESS:		PO Box 469, Questa, NM 87556				
Provide additional information as needed in Comments below.						
Sample ID	Date	Time *	Lab ID	Matrix	pH	No. of Containers
Outfall 001-TQ1N-081417	8/14/17	10:47		SFW	7.25	14
Outfall 001-DQ1N-081417	8/14/17	10:47		SFW	7.25	4

ALS Environmental Laboratory method for chromium (Cr) VI is SW7196, which requires unpreserved samples and has 24-hr hold time. Per ALS it seems that the finding is referring to Method 218.6, which is Hexavalent Chromium (as CrO_4^{2-}), chromate which is a different method, not related to SW7196 Cr VI.

ALS Environmental Laboratory reviewed the statement on Cyanide and the only method they have available is Method 335.2 and the chemistry is the same between both methods. Method 335.4 is the automated distillation and is not available at ALS; 335.2 is the manual distillation.

For Method SW 8260 voc, ALS will use the equivalent Method EPA 624 for this analysis. Regarding the semi-voc parameters, the equivalent Method EPA 625 will be the chosen method.

The radionuclides testing for the annual sample is correct; for example, "gross alpha/beta 724" is the ALS SOP number, which is the direct reference to Method EPA 900.

Section G – Effluent/Receiving Water – Unsatisfactory

Part .A of the 2013 NPDES Permit requires monitoring and reporting for Whole Effluent Toxicity (WET) Testing, which include 24-hour composite, 7-day Static Renewal for *Pimephales promelas* and *Ceriodaphnia dubia* (*C. dubia*) species once a quarter for Outfall 001. WET testing results for sub-lethal reproduction *C. dubia* NOEC was 41%, below the critical dilution of 54%, for samples collected June 4 thru 6, 2018 and follow up monthly re-tests to determine the length of toxicity were scheduled (GEI, Whole Effluent Toxicity Testing Report, Outfall 001, June 22, 2018).

Part I.A (Monitoring and Effluent Limitations) in the 2013 NPDES Permit for Outfall 002 include a TSS Daily Max concentration of 30 mg/L which was exceeded in June 2016 as previously discussed.

Response:

The finding of "unsatisfactory" in relation to the *C. dubia* WET test-initiated June 5 is not warranted. The permit requires follow-up testing to be performed to determine the duration of a toxic event, followed by additional testing if the toxicity is persistent. Provided all of the monthly retests are conducted in the appropriate timeframe, as is the case here, the permit conditions have been met. While the reproduction sublethal endpoint failure was not expected, additional testing has been performed according to the permit requirements, indicating a satisfactory response to the sublethal effects.

See Section B for 2016 TSS response.

Thank you for your consideration in this matter and should you have any questions or require additional information regarding this report, please contact Cindy Gulde at (575) 586-7606.

Sincerely,



Michael D. Coats

cc:

Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Nancy Williams, USEPA (6EN-WC) by e-mail
David Long, USEPA (6EN-WM) by e-mail
Robert Houston, USEPA (6EN-WS) by e-mail
David Esparza, USEPA (6EN-WM) by e-mail
Amy Andrews, USEPA (6EN-WM) by e-mail
Tony Loston, USEPA (6EN-WM) by e-mail

Brent Larsen and Tung Nguyen, USEPA (6WQ-PP) by e-mail

Gary Baumgarten, USEPA (6SF-RA) by e-mail

Robert Italiano, NMED District II by e-mail

Anne Mauer, Chevron-Questa Mine Permit Lead, NMED GWQB by e-mail

Joseph C. Fox, NMED GWQB by e-mail

Cindy Gulde, Chevron EMC by e-mail

Armando Martinez, Chevron EMC by e-mail

Jeff Schoenbacher, Chevron EMC by e-mail

